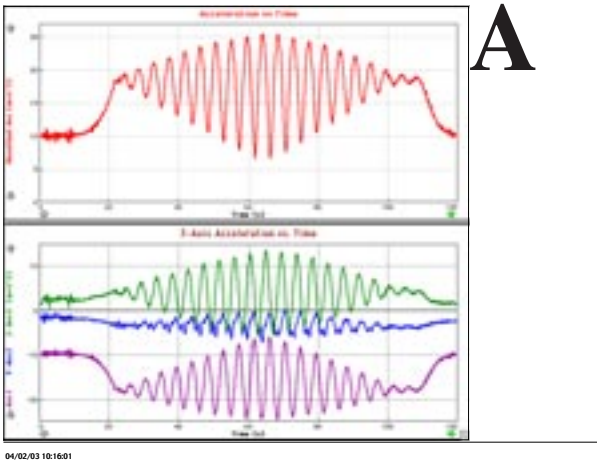
Six Flags

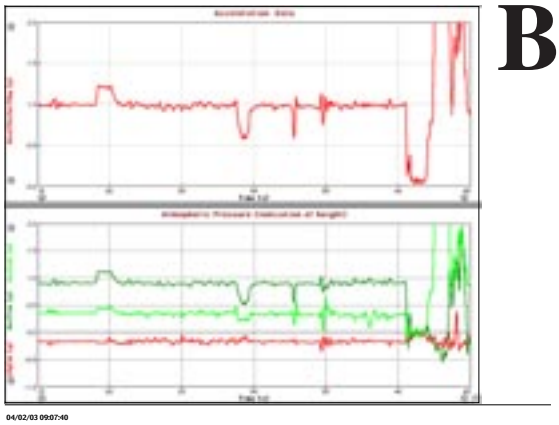
ACCELERATION MATCH GAME
Answer Key



A

Silver Bullet

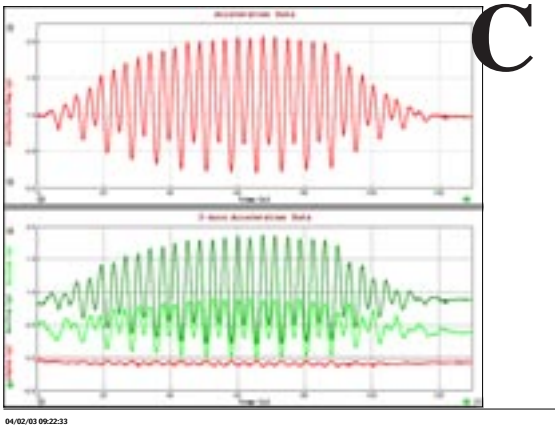
Notice the gradual increase in acceleration as the ride spins faster to start. When the ride is gradually tilted, the rider feels lighter at the top and heavier at the bottom. When the ride is inclined the highest, there is the biggest difference in acceleration between top and bottom.



B

Mr. Hyde's Nasty Fall

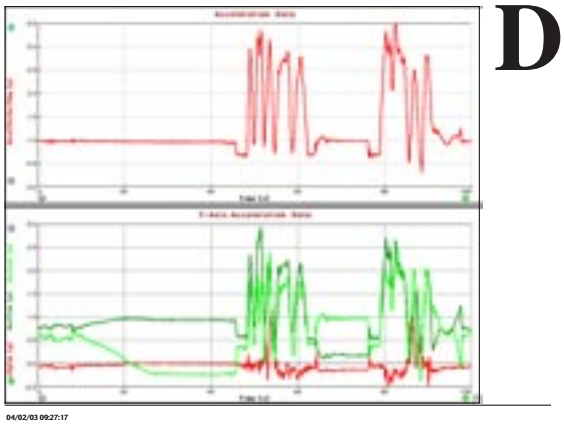
Notice the sudden reduction of total acceleration at about t=41 sec. which indicates the beginning of the drop. The free-fall continues for about 1.5 seconds.



C

Bounty

Notice the asymmetric nature of the accelerations due to the rider sitting at one end of the boat. The feeling is different at one end of the ride than at the other. The lower peaks would be more even if measured at the center of the boat.



D

Mind Eraser

The key feature in this roller coaster is the two groups of accelerations separated by a period of 1-g. Notice the gradual climb up the first hill and then the gradual climb to the top of the second hill.

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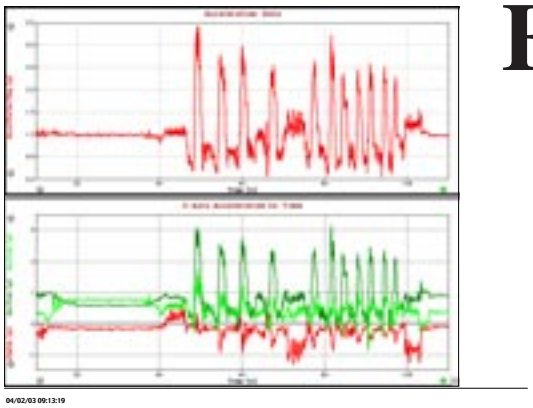
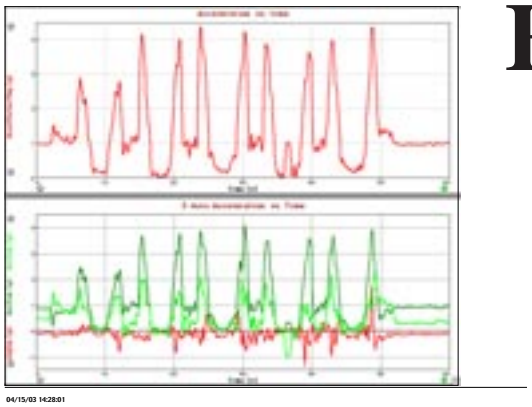


E

Big Dipper

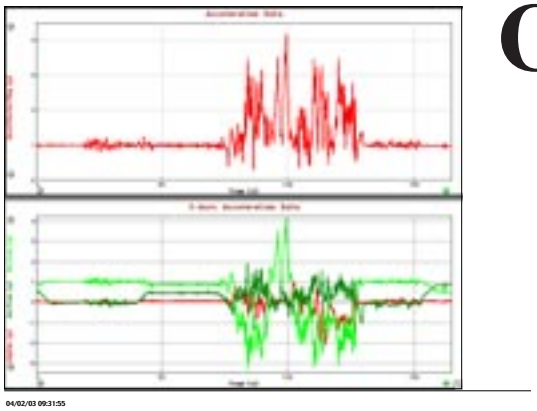
This older roller coaster shows a pattern of fairly regular hills and valleys. The gradual climb up the first hill is on the left.



F

Superman Ultimate Escape

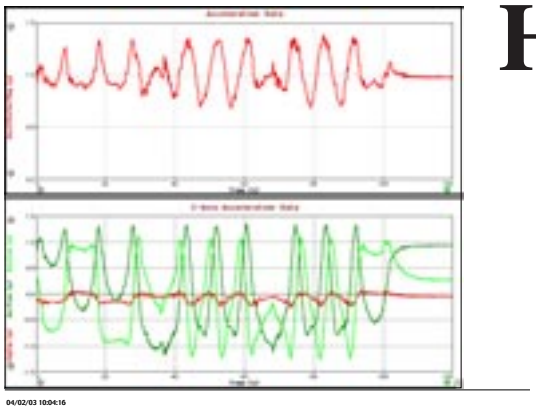
Notice the acceleration reductions when the train reaches the top of each hill. On the fourth peak, notice the train is 'caught' and held for a fraction of a second - the acceleration goes to -1 g for a moment.



G

X Flight

Notice the immediate change in the Y-axis acceleration as the rider is reclined in the station at the beginning of the ride. and the change in acceleration at the beginning up the long upward slope of altitude going up the first hill.



H

Time Warp

Notice the cyclical motion as the riders are smoothly swung around in a circular motion and turned upside-down. The left/right acceleration varies only slightly since there is no motion in that direction on this ride.